Attorney's Docket No. 9314-45   PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: William O. Camp, Jr.   Group Art Unit: 2618
Application No.: 10/626,224   Examiner: Eugene Yun
Filed: July 24, 2003   Confirmation No. 4546
For: WIRELESS TERMINALS AND METHODS FOR COMMUNICATING
       OVER CELLULAR AND ENHANCED MODE BLUETOOTH
       COMMUNICATION LINKS

                                           Date: May 17, 2007

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Commissioner for Patents
P.O. Box 1450
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REQUEST FOR RECONSIDERATION

Sir:

The present Request for Reconsideration is in response to the Final Office Action mailed March 19, 2007 (hereinafter "Final Office Action"). Applicant appreciates the withdrawal of the earlier restriction requirement of the Office Action dated December 13, 2006, and the continued examination of Claims 1-3, 7-16, 19-24, and 26-29 and citation of new references. In the interest of brevity and without waiving the right to argue additional grounds on appeal should this request be denied, Applicant will only discuss the particular recitations of independent Claims 1, 3, 9, 10, 11, 15, 21, 22, and 23 that are not described or suggested by the cited references. Applicant requests reconsideration and allowance of the pending claims in view of the following remarks.

Independent Claims 1, 3, 11, 15, and 23 stand rejected under 35 U.S.C. § 103(a) as unpatentable over PCT Published Application No. WO 00/74350 to Rasmusson et al. ("Rasmusson") in view of newly cited U.S. Patent No. 6,879,600 to Jones et al. ("Jones"). Independent Claims 9, 10, 21, and 22 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Rasmusson in view of newly cited U.S. Patent No. 7,181,252 to Komsi ("Komsi").

Independent Claims 1, 3, 11, 15, and 23 Are Patentable over Rasmusson in view of Jones:

Claim 1 recites, *inter alia*, that the processor of the wireless terminal is:

1) configured to encode voice in the second information using at least one of an Enhanced Full Rate (EFR) codec and an Adaptive Multi-Rate (AMR) codec for transmission by the cellular transceiver according to a signal processing operation, and

2) *configured to selectively encode voice in the first information using at least one of the EFR codec and the AMR codec for communication by the short-range communication module using the signal processing operation* **based on whether the communication device supports an enhanced communication mode**.

The Final Office Action contends on pages 2-3 that Rasmusson discloses all recitations of Claim 1 except that "Rasmusson does not teach encoding voice in short-range and cellular communication using at least one of an Enhanced Full Rate (EFR) codec and an Adaptive Multi-Rate (AMR) codec for communication". The Final Office Action then contends that this missing teaching of Rasmusson is supplied by Jones' description of EFR and AMR codecs. However, Applicant submits that Rasmusson also does not describe or suggest the second above-enumerated recitation of Claim 1, that a wireless terminal is configured to *selectively encode voice in the first information using at least one of the EFR codec and the AMR codec for communication by the short-range communication module using the signal processing operation based on whether the communication device supports an enhanced communication mode*.

The Final Office Action contends that the second above-enumerated recitation of Claim 1 is disclosed at page 15, lines 11-32 of Rasmusson, which are repeated below for convenience of reference:

> In one aspect of the invention, then, the hands-free adapter 201 provides self-identifying information to the mobile telephone 203. The self-identifying information is sufficient to permit the mobile telephone 203 to determine pertinent performance characteristics of the hands-free adapter 201. Another aspect of the invention relates to what the mobile telephone 203 does

with this information. This aspect of the invention will be described with reference to the exemplary mobile telephone 203 depicted in FIG. 2 in conjunction with the flowchart depicted in FIG. 3. *To facilitate an understanding of the invention, it will be assumed here that the hands-free adapter communicates a performance class identifier to the mobile controller 209 located in the mobile telephone 203.* In other embodiments, however, the self-identifying information could take any of a number of alternative forms, as described earlier.

In step 301, the mobile controller 209 receives the hands-free adapter's self-identifying information in the form of a hands-free adapter performance class identifier. The mobile controller 209 uses this to optimize a number of settings in the mobile telephone 203 so that the most efficient settings can be used to attain to peak performance for this particular hands-free adapter 201.

In step 303, the *mobile controller 209 adjusts the gain of the microphone amplifier 219 and of the loudspeaker amplifier 217. These settings, which are determined in advance for this particular performance class of hands-free equipment, ensure optimal performance with respect to saturation, interference and distortion associated with a microphone 105 and the loudspeaker 109.*

(Rasmusson, page 15, lines 11-32, emphasis added).

Rasmusson thus describes that the mobile telephone 203 receives a class identifier from the hands-free adapter 201, which, in response to, the mobile telephone 203 "*adjusts the gain of the microphone amplifier 219 and of the loudspeaker amplifier 217*" to controllably amplify a sound signal received from hand-free microphone 105 and to controllably amplify a sound signal transmitted to the hands-free speaker 103. Rasmusson describes that in "step 309, other algorithms/components are adjusted to best suit the particular hands-free adapter 201 that is to operate with the mobile telephone 203[, where] such other algorithms/components include, but are not limited to, noise canceler (sic), near-end voice detectors, other communication filters (uplink and downlink)." (Rasmusson, page 16, lines 27-30).

Rasmusson thus describes that the *gain of the microphone amplifier 219 and of the loudspeaker amplifier 217* can be varied, and that the level of noise filtering applied to filter noise from a sound signal from the microphone amplifier 219 can be varied based on the particular hands-free adapter 201 that transmitted that signal. Rasmusson describes that its motivation for varying the gains applied to the

microphone signal and to the loudspeaker signal from/to a hands-free adapter is to compensate for performance differences between the types of microphones and speakers that can be used in various different hands-free adapters.

Applicant submits that nowhere does Rasmusson appear to contain any description as to voice encoding by the mobile telephone 203, by the hands-free adapter 201, or by any other device. Moreover, Applicant submits that neither the cited portion nor elsewhere does Rasmusson contain any description or suggestion that *voice in a signal transmitted* from the mobile telephone 203 to the hands-free adapter 201 *is selectively encoded* by the mobile telephone 203 *based on the class identifier or any other identifier received from the hands-free adapter 201*. Moreover, Applicant submits that neither the cited portion nor elsewhere does Rasmusson contain any description or suggestion that the mobile telephone 203 *selectively encodes voice* using a EFR codec and/or a AMR codec for transmission to the hands-free adapter 201 *based on whether the hands-free adapter 201 can receive that type of encoded voice*.

Consequently, Applicant submits that Rasmusson further does not describe or suggest at least the second above-enumerated recitation of Claim 1, that a wireless terminal is configured to *selectively encode voice in the first information using at least one of the EFR codec and the AMR codec for* communication by the short-range communication module using the signal processing operation *based on whether the communication device supports an enhanced communication mode*.

Applicant further submits that Jones' brief and general description of EFR and AMR codecs does not describe or suggest the recitations that are missing from Rasmusson.

Consequently, Applicant submits that at least the second above-enumerated recitations of Claim 1 are not described or suggested by Rasmusson in view of Jones and, accordingly, that Claim 1 is patentable over Rasmusson in view of Jones.

Independent Claims 3 and 15 contain similar recitations to Claim 1 are therefore submitted to be patentable over Rasmusson in view of Jones for at least the reasons explained above for Claim 1.

Accordingly, Applicant requests reconsideration and allowance of independent Claims 1, 3, and 15.

Claim 11 recites, *inter alia,* that the processor of the wireless terminal is configured to selectively encode information, *by selectively embedding control data in the information,* for *transmission by a Bluetooth module based on whether the remote Bluetooth device supports an enhanced communication mode.*

The Final Office Action concedes on pages 5-6 that Rasmusson does not describe or suggest these recitations of Claim 11, but then suggests that these recitations are disclosed in Jones at col. 10, line 61 to col. 11, line 2. The cited portion of Jones is repeated below for convenience of reference:

> To encapsulate the outgoing-first-protocol voice content in headers of the second protocol, the mobile station 116 may place or embed the outgoing-first-protocol voice content in the payload of one or more second-protocol packages to produce outgoing-second-protocol-encapsulated-first-protocol data. Similar to the incoming-first-protocol voice content, the outgoing-first-protocol voice content may itself incorporate encapsulated outgoing voice content in headers of the first protocol.
> (Jones, col. 10, line 61 to col. 11, line 2).

Jones thus describes encapsulation of a first-protocol voice content in the payload of a second-protocol package. However, Applicant submits that neither the cited portion nor elsewhere does Jones describe or suggest that the mobile station 116 *selectively encapsulates* the first-protocol voice content in the payload of a second-protocol package *based on whether the other mobile station supports an enhanced communication mode.* Moreover, Applicant submits that neither the cited portion nor elsewhere does Jones describe or suggest that the wireless terminal 116 selectively encodes information, *by selectively embedding control data in the information,* for *transmission by a Bluetooth module based on whether a remote Bluetooth device supports an enhanced communication mode.*

Consequently, Applicant submits that at least the above-highlighted recitations of Claim 11 are not described or suggested by Rasmusson in view of Jones and, accordingly, that Claim 11 is patentable over Rasmusson in view of Jones.

Independent Claim 23 contains similar recitations to Claim 11 and is therefore

submitted to patentable over Rasmusson in view of Jones for at least the reasons explained above for Claim 11.

Accordingly, Applicant further requests reconsideration and allowance of independent Claims 11 and 23.

Independent Claims 9, 10, 21, and 22 Are Patentable Rasmusson in view of Komsi:

Independent Claim 9 recites, *inter alia*, that a processor in a wireless terminal is configured to convolutionally encode information for transmission to a cellular network, and to selectively convolutionally encode information for transmission to a remote Bluetooth device by a Bluetooth module based on whether the remote Bluetooth device supports an enhanced communication mode.

The Final Office Action concedes on page 8 that Rasmusson does not describe or suggest these recitations of Claim 9, but then suggests that these recitations are disclosed in Komsi at col. 6, lines 18-33. The cited portion of Komsi is repeated below for convenience of reference:

> It is understood that the controller 50 includes the circuitry required for implementing the audio and logic functions of the mobile station. For example, the controller may be comprised of a digital signal processor device, a microprocessor device, and various analog to digital converters, digital to analog converters, and other support circuits. The control and signal processing functions of the mobile station are allocated between these devices according to their respective capabilities. *The controller thus also includes the functionality to convolutionally encode and interleave message and data prior to modulation and transmission.* The controller can additionally include an internal voice coder (VC) 50A, and may include an internal data modem (DM) 50B. Further, as described more fully below, the controller 50 includes the functionality to interpret security messages received by the mobile station, and thereafter perform various security functions in accordance with such security messages.
> (Komsi, col. 6, lines 18-33, emphasis added).

Accordingly, it appears that Komsi's relevant description is that the "*controller thus also includes the functionality to convolutionally encode and interleave message and data prior to modulation and transmission.*" Applicant submits that neither the cited portion nor other portions of Komsi describe or suggest that the controller 50 is

configured to *selectively convolutionally encode information* for transmission to a remote Bluetooth device by a Bluetooth module *based on whether the remote Bluetooth device supports an enhanced communication mode.*

Consequently, Applicant submits that at least the above-highlighted recitations of Claim 9 are not described or suggested by Rasmusson in view of Komsi and, accordingly, that Claim 9 is patentable over Rasmusson in view of Komsi.

Independent Claim 21 contains similar recitations to Claim 9 and is therefore submitted to be patentable over Rasmusson in view of Komsi for at least the reasons explained for Claim 9.

Accordingly, Applicant requests reconsideration and allowance of independent Claims 9 and 21.

Independent Claim 10 recites, *inter alia*, that a processor in a wireless terminal is configured to interleave information over time for transmission by a cellular transceiver, and to selectively interleave information over time for transmission to a remote Bluetooth device by a Bluetooth module based on whether the remote Bluetooth device supports an enhanced communication mode.

The Final Office Action concedes on page 9 that Rasmusson does not describe or suggest these recitations of Claim 10, but then suggests that these recitations are disclosed in Komsi at col. 6, lines 18-33. Reference is again made to the cited portion of Komsi which is repeated above during the explanation of Claim 9.

It appears that Komsi relevant description is that the "*controller thus also includes the functionality to convolutionally encode and interleave message and data prior to modulation and transmission.*" Applicant submits that neither the cited portion nor other portions of Komsi describe or suggest that the controller 50 is configured to *selectively interleave information over time* for transmission to a remote Bluetooth device by a Bluetooth module *based on whether the remote Bluetooth device supports an enhanced communication mode.*

Consequently, Applicant submits that at least the above-highlighted recitations of Claim 10 are not described or suggested by Rasmusson in view of Komsi and, accordingly, that Claim 10 is patentable over Rasmusson in view of Komsi.

Independent Claim 22 contains similar recitations to Claim 10 and is therefore submitted to be patentable over Rasmusson in view of Komsi for at least the reasons explained for Claim 10.
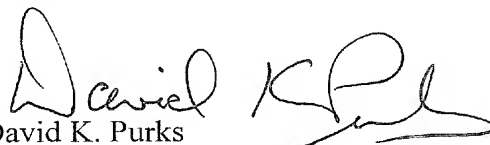
Accordingly, Applicant requests reconsideration and allowance of independent Claims 10 and 22.

CONCLUSION

In light of the above remarks, Applicant respectfully submits that the above-entitled application is in condition for allowance. Favorable reconsideration of this application is respectfully requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (919) 854-1400.

It is not believed that an extension of time and/or additional fee(s), including fees for additional claims, are required, beyond those that may otherwise be provided for in documents accompanying this paper. In the event, however, that an extension of time is necessary to allow consideration of this paper, such an extension is hereby petitioned under 37 C.F.R. §1.136(a). Any additional fees believed to be due in connection with this paper may be charged to our Deposit Account No. 50-0220.
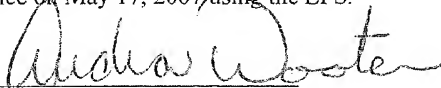
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